

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D 29 MAR 2005

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Applicant's or agent's file reference P-IEE-087WO		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/50962	International filing date (day/month/year) 08.12.2003	Priority date (day/month/year) 09.12.2002	
International Patent Classification (IPC) or both national classification and IPC H01H13/70			
Applicant IEE INTERNATIONAL ELECTRONICS & ENGINEERING S.A.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 17.06.2004	Date of completion of this report 30.03.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Ramírez Fueyo, M Telephone No. +31 70 340-4266 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/EP 03/50962**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-8 as originally filed

Claims, Numbers

1-7 as originally filed

Drawings, Sheets

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-7
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-7
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/50962

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following document:

- D1: PATENT ABSTRACTS OF JAPAN vol. 013, no. 453 (E-831), 11 October 1989 (1989-10-11) & JP 01 176615 A (MATSUSHITA ELECTRIC IND CO LTD), 13 July 1989 (1989-07-13)
D2: US-A-5 871 842 (SILVA NEILL N ET AL) 16 February 1999 (1999-02-16)

2. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, the switching element described therein having a structure very similar to that of the element described in the application. It shows (the references in parentheses applying to this document) a foil type switching element comprising a first carrier foil (26) and a second carrier foil (30) arranged at a certain distance from each other by means of a spacer, said spacer comprising at least one recess defining an active area of the switching element, and at least two electrodes arranged in the active area of the switching element between said first and second carrier foils in such a way that, in response to a pressure acting on the active area of the switching element, the first and second carrier foils are pressed together against the reaction force of the elastic carrier foils and an electrical contact is established between the at least two electrodes.

The subject-matter of claim 1 differs from this known foil type switching element in that **"it comprises a layer of dielectric material, said dielectric material being applied onto said first carrier foil between the carrier foil and an electrode arranged on said first carrier foil, said layer of dielectric material covering at least a region of the first carrier foil which is delimited by a generally outer periphery of the electrode arranged on said first carrier foil"**.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as **"providing a foil type switching element according to the prior art, wherein the adhesion of**

the electrode material is enhanced" (see the description, page 4, lines 18-20).

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

Feature "the switching element comprises a layer of dielectric material, said dielectric material being applied onto said first carrier foil between the carrier foil and an electrode arranged on said first carrier foil, said layer of dielectric material covering at least a region of the first carrier foil which is delimited by a generally outer periphery of the electrode arranged on said first carrier foil" is described in document D2 as providing the same advantages as in the present application (see in particular column 4, line 59 to column 5, line 5 and column 6, lines 11-17). The skilled person would therefore regard it as a normal design option to include this feature in the switching element described in document D1 in order to solve the problem posed.

3. Dependent claims 2-7 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step, the reasons being as follows:

Claims 2: Applying a dielectric layer also on the second carrier foil would also be a matter of normal design procedure, in view of documents D1 and D2.

Claims 3-5: Document D2 also discloses the features of these claims.

Claim 6 and 7: In this claim a slight constructional change in the foil type switching element is suggested which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can be readily contemplated in advance.

4. Industrial applicability.

The subject matter of the application refers to a foil type switching element that is definitely industrially applicable.